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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/551,529

09/30/2005

Arto Koponen

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EXAMINER

TANG, JEFF

ART UNIT

PAPER NUMBER

3634

MAIL DATE

DELIVERY MODE

07/16/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/551,529	Applicant(s) KOPONEN, ARTO	
	Examiner Jeff Tang	Art Unit 3634	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 6 July 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 13-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 13-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

The amendment filed on July 6 2009 has been received. The Final Office Action dated March 31 2009 has been withdrawn. A new Non-Final Office Action is submitted.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. **Claims 13- 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stevens et al. (US 6,002,217) in view of Urwin (US 3,687,921) in view of Holley, Jr. (US 3,731,171).** Stevens et al. disclose a swing door apparatus for controlling movement of a swing door, the swing door apparatus comprising an operation shaft (drive shaft of 212 Column 3, lines 53-55) for connection to the swing door whereby the operating shaft turns in accordance with movement of the swing door, first and second potentiometers (108, 130), but do not disclose the potentiometers being on a common shaft. However, Urwin discloses two potentiometers (30, 31) on a common shaft (18). It would have been obvious to use a common shaft as taught by Urwin instead of a common ring gear (38). The motivation for doing so would be to reduce the number of moving parts.

Stevens et al. does not mention the characteristic curves either. However, Holley, Jr. discloses two potentiometers (44, 46) on a common gear (38) that are shifted out of phase with each other (Column 4, lines 43-68). While Holley is for a shaft on an

Art Unit: 3634

antenna, the overall idea is not limited to antenna or door control, but rather motor/shaft feedback. This teaching talks about dead areas for potentiometers in a 360 degree rotation. There is need for another sensor out of phase (somewhere else around the shaft) to determine direction of movement. A single sensor is if there is only one direction of rotation (drill presses, dryers..etc.), but with two out of phase sensors, direction is easily determined (In clockwise rotation the magnet on the shaft will be going towards one sensor and away from the other based on the direction of travel. The same is similarly true for potentiometers, but they are operate with changing resistance. Therefore, it would have been obvious to one of ordinary skill in the art to have used two potentiometers so that the there is constant tracking of the position of the door.

Regarding claim 14, Holley, Jr. discloses the curves are shifted in phase with respect to one another by substantially 180 degrees (Column 4, lines 43-68).

Regarding claim 15, Stevens et al. discloses wherein it comprises a control unit which is used for detection of the door position (Column 5, lines 57-67).

Regarding claims 16 and 17, the combination of Urwin and Holley, Jr. disclose wherein the common potentiometer shaft (18, Urwin) is mounted to a drive wheel (38, Holley, Jr.) which is mechanically coupled to said operation shaft; **[claim 17]** wherein the drive wheel is a gear (38, Holley, Jr.) that is in meshing engagement with a gear attached to the operation shaft.

Regarding claim 18, Holley, Jr. discloses the apparatus comprising an electric motor (14) coupled drivingly to said operation shaft (32) and a power source wherein

Art Unit: 3634

said potentiometer receive power from said power source. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have a power source to power the motor and potentiometer since the examiner takes Official Notice of the equivalence of motors and power sources for their use in the mechanical art and the selection of any of these known equivalents to provide power to the motor and potentiometers would be within the level of ordinary skill in the art.

Regarding claim 19, Urwin discloses a body structure to which the potentiometers are attached and wherein each potentiometer has a slider member (34) connected to the potentiometer shaft.

Response to Arguments

Applicant's arguments with respect to all claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeff Tang whose telephone number is (571) 270-5223. The examiner can normally be reached on Monday-Friday 8:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Katherine Mitchell can be reached on (571) 272-7069. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3634

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/KATHERINE W MITCHELL/
Supervisory Patent Examiner, Art
Unit 3634

/J. T./
Examiner, Art Unit 3634